

# SNOW-PLOWABLE RAISED PAVEMENT MARKERS

*Doc Jisdale, M.P.A.*

Assistant Division Chief

Structural Materials & Pavement Marking Division

Office of Materials Technology

Maryland State Highway Administration

7450 Traffic Drive

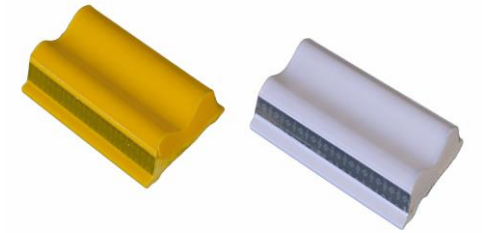
Hanover, MD 21076

# Snow Plowable Raised Pavement Markers

- ✓ Raised/Recessed Pavement Markers (SRPM) are a type of traffic control device
- ✓ Pre-manufactured, reflectorized devices that provide positive in-roadway delineation at night
- ✓ The Manual on Uniform Traffic Control Devices (MUTCD) allows the use of pavement markers as a supplement to traditional longitudinal markings.

Pavement markers cannot be used as a replacement for standard line-stripping:

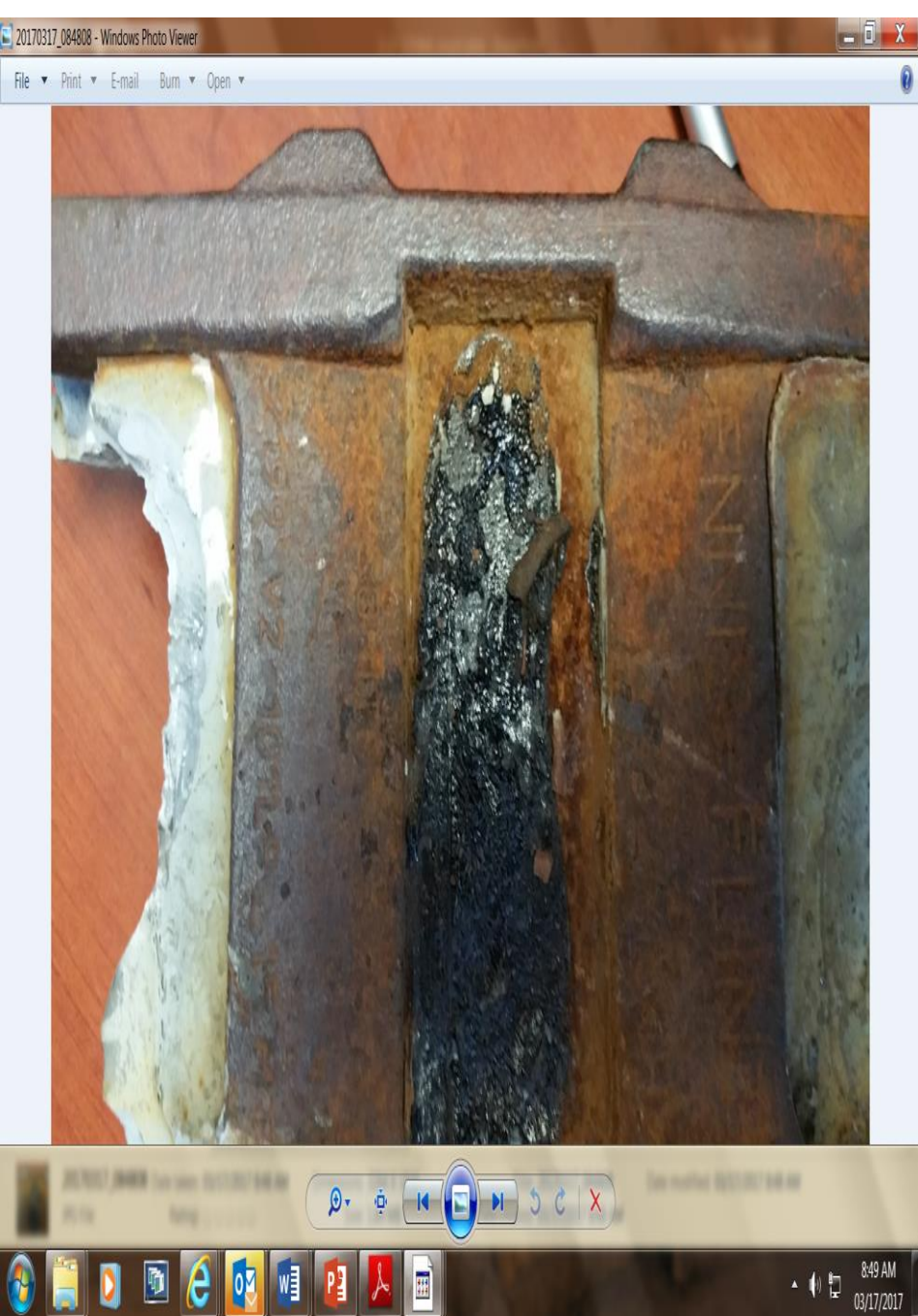
- ✓ Raised temporary markers are normally used with construction zone markings. They are commonly referred to as "temporary markers" or "RPMs" Glued to the roadway with a bitumen or epoxy adhesive.











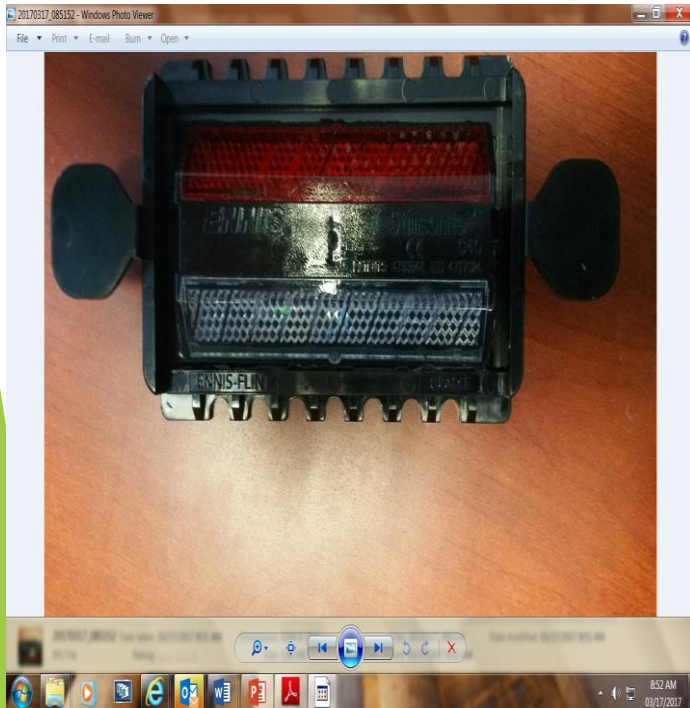
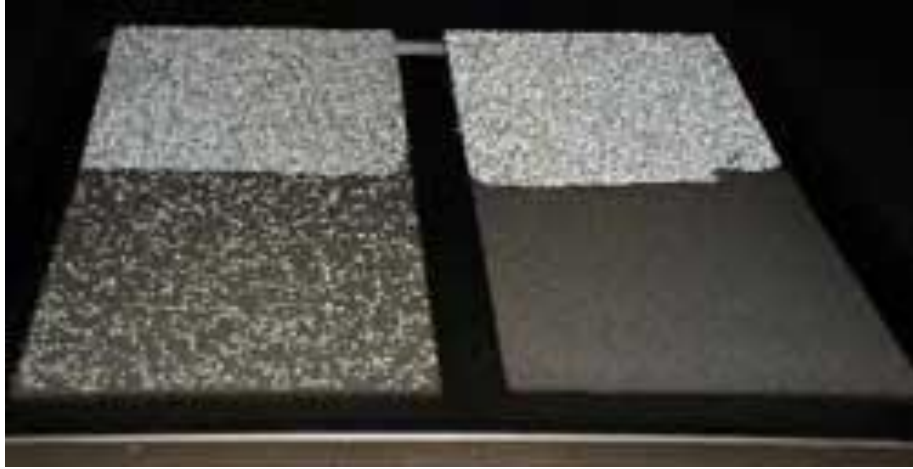








# Wet Reflective Products



Picture or video of taking out rpm  
plastic



# Equipment & Visual Inspections



## Visual Inspection

Housing (or Holder) Condition: 5 4 3 2 1 0

Lens Face Condition: 5 4 3 2 1 0

Night Visibility : 5 4 3 2 1 0

Abrasions  
cuts  
Cracks  
reflectivity

# New SRPM Specification Changes

- ▶ Only a shelf spec (Marker One & Model 201 Cradle)
- ▶ 55 mph two lens (New Typical)
- ▶ Plastic Holder (Tabs on top of Surface) Manf. Recon
- ▶ Steel Holder allow lens replacement
- ▶ No Plastic Holder( Recessed)  $\frac{1}{4}$  below surface









rpm TYP-558.01.pdf



Type	Cost	Expected Life	Dry/cure Time	Advantage	Disadvantage	Placement
RPM -Metal Housing	\$31.50/unit	6-10 years (housing) 3 years for lenses	30 minute epoxy set time	Excellent visibility.	Potential risk trend.	Machined grooved (less than 1-foot in length) with glue
RPM-Plastic Housing	\$25-28/unit	3-4 years for housing & lenses	30 minute epoxy set time	Good visibility* Limited safety risk. (Less risk of misalignment)	Length of groove. Proprietary holder Unknown success in heavy snow areas.	Machined grooved (7’ to 9’ in length) with glue
Standalone Lenses	\$25/unit	3 years	30 minute epoxy set time	Good visibility Limited safety risk. (More effort to assure correct alignment is achieved)	Length of groove. Limited success in heavy snow areas.	Machined grooved (3’ to 4’ in length) with glue
Polyurea***	\$0.70-\$1/lf**	4 years +?**** 2 years > 150mcd 3 years > 100mcd	5-8 minutes	Limited safety risk.	New grooving process.	Surface applied or applied in a grooved***
Epoxy***	\$0.20-\$0.30/lf**	4 years +?**** 2 years > 150mcd 3 years > 100mcd	30 minutes	Limited safety risk.	New grooving process.	Surface applied or applied in a grooved***
MMA***	\$0.60-\$1.60/lf**	4 years +?**** 2 years > 150mcd 3 years > 100mcd	20 minutes	Limited safety risk.	New grooving process.	Surface applied or applied in a grooved***

YEAR	DISTRICT/ County	LOCATION	PAVEMENT MARKING MATERIAL	FUNCTION	NOTES
2015	D6 / WA	I-70EB at mile points 6.80 to 12.23	Grooved in Thermoplastic with all-weather elements	Edge Lines & Skips  Centerlines where applicable	Installed October 31, 2015.
2016	D1 / WI	US 50, MM 20.935 – 26.935	Proposing a change order to add Grooved In Thermoplastic with all-weather elements  3M to add 300 lf of grooved all weather tape	Edge Lines & Skips  Centerlines where applicable	Summer installation date To be announce (TBA)
2016	D3 / PG and MO	Various Locations Counties	Grooved in -All weather Thermoplastic and Polyurea with all-weather elements	Edge Lines & Skips  Centerlines where applicable	This project may also include plastic positioning device for Recessed pavement Markers (RPM) or grooving the stand alone lenses  Function RPM are used only as supplement markers
2016	D6 / AL	MD 51 MM 17.42- 19.31	Grooved in Thermoplastic with all-weather elements	Edge Lines & Skips	Summer installation date TBA

Note: These materials and processes are an alternative method to the Snow-Plowable Recessed Pavement Markers (SRPM), in some cases the lenses are used alone in a groove and are typically called- Recessed Pavement Marker(RPM)



				Centerlines where applicable	
2016	D7	MD 94 Bridge over I-70	Ennis Flint's methyl methacrylate	Edge Lines & Skips  Centerlines where applicable	Scheduled to be applied by June 30th, on the bridge deck of this project after eradication of current marking.
2017	D4/BA	IS83 NB, MM 10.48 – 17.56	Grooved in Polyurea with all-weather elements  ----- RPM recessed or plastic positioning device.	Edge Lines & Skips  Centerlines where applicable  ----- supplement markers	Schedule TBA

# Questions

***Doc Tisdale, M.P.A.***

**443-572-5296 Office**

**410-428-4725 Cell**

**1-866-926-8501**